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REMARKSI. Objection to the Title

The title was objected to as not being descriptive. In response to this objection, Applicants have amended the title to read "Medical Image User Interface for Cardiac Imaging." In view of this amendment, Applicants respectfully request that the objection to the title be withdrawn.

II. Claim Rejections of Independent Claims 1, 17, and 27

Independent Claims 1, 17, and 27 were rejected under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent Application Publication No. US 2003/0016852A1 to Kaufman et al. In this Amendment, Applicants have amended independent Claims 1, 17, and 27 to clarify the claims. Specifically, Applicants have amended those claims to clarify that the displayed medical image is a moving image of a beating heart and that the medical image of the beating heart comprises a sequence of image frames. Applicants have also amended those claims to clarify that the displayed plurality of image frames are acquired at end-diastolic (ED) and end-systolic (ES) portions of the beating heart's cycle. Kaufman et al. does not teach these elements.

Kaufman et al. is directed to a system in which still images (or slices) of an organ are acquired and displayed. The still images are used to construct a three-dimensional composite image. With reference to the user interface in Figure 2 of Kaufman et al., the selected image 42 is a still image (or slice) of a heart — not a moving image of a beating heart, as recited in the amended independent claims. Images 56 and 58 are also still image slices of the heart and represent the previous and next slices to be shown in area 42. The images in areas 48 and 50 are image projections of selected slices, with the image in area 48 representing a projection made from all of the slices in the image, and the image in area 50 representing a projection made from

only selected image slices. Accordingly, none of the images shown in the user interface of Kaufman et al. are of a moving image of a beating heart, as recited in the amended independent claims.

The amended independent claims also recite displaying, in addition to the moving image of the beating heart, a plurality of image frames, from that image, that are acquired at end-diastolic (ED) and end-systolic (ES) portions of the beating heart's cycle. Kaufman et al. also does not show this feature. Because Kaufman et al. desires to obtain and display a still image of the heart, Kaufman et al. views heart motion as noise that will cause blurring of the image. Kaufman et al. recognizes that the blurring of an image is most likely to occur during systole, where the heart is in motion, and less likely to occur during diastole, where the heart is relatively motionless. To take advantage of these conditions, Kaufman et al. uses a gating function so as to only use the still images taken at diastole, where the heart is relatively motionless, and not at systole, where the heart is in motion. Accordingly, the slices of the heart that are shown in the user interface in Figure 2 are taken at diastole — not both diastole and systole. In contrast, the amended independent claims recite that the displayed plurality of image frames are acquired at end-diastolic (ED) and end-systolic (ES) portions of the beating heart's cycle.

Because Kaufman et al. is missing these features, Kaufman et al. fails to anticipate independent Claims 1, 17, and 27. Accordingly, the rejections of those claims and their dependent claims should be withdrawn. Applicants further submit that one skilled in the art would not have been motivated to modify Kaufman et al. to yield the missing elements because such a modification would not only be contrary to the basic operating principle of Kaufman et al. (displaying image slices — not a moving image of a beating heart), but it is also taught away

from by Kaufman et al. (Kaufman et al. specifically teaches that the displayed still images are acquired at diastole — not both diastole and systole).

### III. Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance. Reconsideration is respectfully submitted. If there are any questions concerning this Amendment, the Examiner is invited to contact Joseph F. Hetz (Reg. No. 41,070) at (312) 321-4719.

Dated:

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Respectfully submitted,



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